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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,535	08/20/2001	Edward O. Shaffer II	60393B	5814

109 7590 08/11/2004

THE DOW CHEMICAL COMPANY  
INTELLECTUAL PROPERTY SECTION  
P. O. BOX 1967  
MIDLAND, MI 48641-1967

EXAMINER
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KILDAY, LISA A

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/933,535	Applicant(s) SHAFFER ET AL. 	
	Examiner Lisa Kilday	Art Unit 2829	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-23 and 29-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/1, 6/2, 5/3, 6/3, 5/4</u> <i>AK 8/3/4</i> | 6) <input type="checkbox"/> Other: _____  |

***Election/Restrictions***

Applicant's election with traverse of claims 24-28 in the reply filed on 6/25/4 is acknowledged. The traversal is on the ground(s) that claims 29-31 are drawn to methods of making and using the composition and claims 18-21 and 23 are uses of the composition which belong with elected invention of claims 24-28, the composition. This is not found persuasive because the composition is not generic to claims 29-31 and 18-21 and 23. Claims 18-21 and 23 are mutually exclusive from the elected composition claims because according to MPEP 806.05, related inventions can be restricted as long as the method of making and the product made by the process are distinct and the process is not an obvious process of making the product.

The process as claimed can be used to make other and different products or the composition as claimed can be made by another materially different process. In this case, the composition can be made by spinning on a material, not by hydrolysis. See MPEP 806.05(f). Applicant's representative admitted in the second paragraph on page 11 of their 6/25/4 response, that claims 1-21 have another use such as making a microelectronic device *other than* the stated utility of making a resin. Therefore, claims 1-21 and 30-31 are withdrawn.

Claim 23 which is dependent on independent claim 22 is an integrated circuit device which requires forming transistors on a substrate. The composition can exist in solution and thus distinct from the integrated circuit. See MPEP 806.05(g). Applicant's representative argues that the restriction is not burdensome. Applicant's point is not

Art Unit: 2829

persuasive. Restriction is proper because each group is distinct, mutually exclusive and diversely classified.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Objections***

Claim 27 objected to because of the following informalities: in line 9 of claim 27, change "a.non" to --a non--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Cohen et al. (7,596,733). In re claim 24, Cohen et al. discloses a composition comprising the hydrolyzed or partially hydrolyzed product (col. 6, lines 13-50 where hydrolyze means to change when exposed to water. Cohen et al. discloses a condensation reaction which is hydrolysis or partial hydrolysis) of a combination of silanes (col. 5, lines 39-55) comprising (a) an alkoxysilane or acyloxysilane having at least one hydrocarbon group attached directly to the Si atom which hydrocarbon group contains a non-aromatic, unsaturated carbon to carbon bond (col. 5, line 50-disclosure of  $-\text{CH}=\text{CH}_2$  which is a hydrocarbon group that contains non-aromatic unsaturated carbon to carbon bond attached directly to the Si atom in fig. 1 in col. 5; also disclosed in fig. 2 of col. 5 and col. 5, line 65), and (b) an alkoxysilane or acyloxysilane having at least one hydrocarbon

Art Unit: 2829

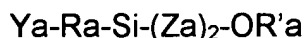
group attached directly to the Si atom which hydrocarbon group includes an aromatic ring (col. 5, line 50 discloses a hydrocarbon group of  $-C_6H_5$  which is an aromatic ring directly attached to the Si atom of an alkoxysilane; see also fig. 2 of col. 5 and col. 5, line 65). Also see Cohen et al.'s claims 1, 6, 10, 14.

In re claim 25, Cohen et al. discloses the composition of claim 24 wherein the combination further comprises (c) an alkoxysilane or acyloxysilane having at least one  $C_1$ - $C_6$  alkyl group attached directly to the Si atom (col. 5, lines 55-66 where  $R_1$  or  $R_2$  can contain an alkyl group such as methyl,  $-CH_3$ ).

In re claim 26, Cohen et al. discloses the composition of claim 24 wherein the first silane (a) is a vinyl acetoxy silane (col. 5, lines 40-50; *emphasis on* vinyl constituent  $-CH=CH_2$ ) and the second silane (b) is an arylalkoxysilane (col. 5, lines 40-50, *emphasis on* aryl constituent of  $-C_6H_5$ ).

In re claim 27, Cohen et al. discloses the composition of claim 25 wherein the combination comprises,

(a) 50-95 mole % silanes of the formula (col. 6, lines 21-50):

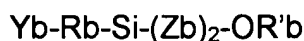


wherein  $R_a$  is  $C_1$ - $C_6$ : alkylidene,  $C_1$ - $C_6$  alkylene, arylene, or a direct bond (col. 5, line 50  $-CH=CH_2$ );  $Y_a$  is  $C_1$ - $C_6$  alkyl (col. 5, line 49,  $-CH_3$ ),  $C_2$ - $C_6$  alkenyl,  $C_2$ - $C_6$  alkynyl,  $C_6$ - $C_{20}$  aryl, 3-methacryloxy, 3-acryloxy, 3-aminoethyl-amino, 3-amino,  $-SiZa_2OR'a'$ , or  $-OR'a'$ ;  $R'a'$  is independently, in each occurrence, a  $C_1$ - $C_6$  alkyl or  $C_2$ - $C_6$  acyl (col. 5, lines 50-51 where  $OR'$ ,  $OR''$ ,  $OR'''$  contain  $-CH_3$  groups), and  $Z_a$  is  $C_1$ - $C_6$  alkyl (col. 5, line 50 where Cohen et al. discloses that  $Z_a=R$  is  $-CH_3$  or  $-C_2H_5$  or  $-$

Art Unit: 2829

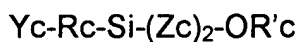
C<sub>3</sub>H<sub>7</sub>), C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-6 alkynyl, C<sub>6-20</sub> aryl, or -ORa', provided at least one of Za or the combination Ra-Ya comprises a non-aromatic carbon carbon bond unsaturation (see col. 5, lines 39-51; wherein the hydrocarbon containing a non-aromatic carbon-carbon bond is disclosed in col. 5, line 50 as -CH=CH<sub>2</sub>),

(b) 5 to 40 mole percent (col. 6, lines 21-40)



wherein Rb is C<sub>1</sub>-C<sub>6</sub> alkylidene, C<sub>1</sub>-C<sub>6</sub> alkylene, arylene, or a direct bond (col. 5, line 64 where R<sub>1</sub> and R<sub>2</sub> are -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> and Rb is represented as either Cohen's R<sub>1</sub> or R<sub>2</sub>); Yb is C<sub>1</sub>-C<sub>6</sub> alkyl (Cohen et al. discloses in col. 5, line 64 where R<sub>1</sub> and R<sub>2</sub> are -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub> and R<sub>1</sub> and R<sub>2</sub> can be Yb), C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-6 alkynyl, C<sub>6</sub>-C<sub>20</sub> aryl, 3-methacryloxy, 3-acryloxy, 3-aminoethyl-amino (col. 7, lines 1-15), 3-amino (col. 7, lines 1-15), -SiZb<sub>2</sub>ORb', or -ORb'; Rb' is independently, in each occurrence, a C<sub>1</sub>-C<sub>6</sub> alkyl (Cohen et al. discloses in col. 5, lines 55-65 that Rb' can be R<sub>2</sub> and R<sub>4</sub> which are alkyls of -CH<sub>3</sub> or -C<sub>2</sub>H<sub>5</sub>) or C<sub>2</sub>-C<sub>6</sub> acyl; and Zb is C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-6 alkmyl, C<sub>6</sub>-20 aryl, or -ORb', provided at least one of Zb or the combination of Rb-Yb comprises an aromatic ring (col. 5, lines 55-66; wherein the hydrocarbon Zb or the combination of Rb-Yb comprises an aromatic ring disclosed in col. 5, line 65 as -C<sub>6</sub>H<sub>5</sub>), and

(c) 0 to 45 mole percent



wherein Rc is C<sub>1</sub>-C<sub>6</sub> alkylidene, C<sub>1</sub>-C<sub>6</sub> alkylene, arylene, or a direct bond; Yc is C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>2</sub>-6 alkynyl a C<sub>6</sub>-C<sub>20</sub> aryl, 3-methacryloxy, 3-acryloxy, 3-aminoethyl-amino, 3-amino, -SiZc<sub>2</sub>ORC', or -ORc'; RC' is independently, in each

Art Unit: 2829

occurrence, a C1-C6 alkyl or C2-C6 acyl ; and Zc is C1-C6 alkyl, C1-C6 alkenyl, C2-6 alkynyl, C6-20 aryl, or -ORc', provided at least one of Zc or the combination of Rc-Yc comprises an alkyl (Cohen et al. discloses in col. 5, lines 51-55 that a mixture of various organotrialkoxysilanes and organodialkoxysilanes can be used).

In re claim 28, Cohen et al. discloses the use of the composition as an adhesion promoter (col. 2, lines 57-59).

### **Conclusion**

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0957. See MPEP 203.08.

Any inquiry concerning this communication from the examiner should be directed to Lisa Kilday whose telephone number is (571) 272-1962. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo, can be reached on (571) 272-1957. The fax number for the group is (703) 872-9306. MPEP 502.01 contains instructions regarding procedures used in submitting responses by facsimile transmission.

Lisa Kilday

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8/3/04

*LISA KILDAY  
PATENT EXAMINER  
AU 2829*